

CLAIMS

What is claimed is:

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1. A viewing system comprising an arrangement for producing at least one image that is perceived as three dimensional, whereby interocular separation, proportionately scaled for human interocular separation, is substantially less than about 60 mm.

2. The viewing system according to Claim 1, wherein said arrangement comprises a pair of real cameras for producing the at least one three dimensional image.

3. The viewing system according to Claim 1, wherein said arrangement comprises a pair of virtual cameras for producing the at least one three-dimensional image.

4. The viewing system according to Claim 1, whereby interocular separation, proportionately scaled for human interocular separation, is about 2 mm or less.

5. The viewing system according to Claim 1, further comprising means for compensating the center-of-interest as to reduce convergence-accommodation conflict.

6. A method of producing at least one image for being perceived as three-dimensional, said method comprising the step of compensating the center-of-interest of the at least one image in such a manner as to reduce convergence-accommodation conflict.

7. The method according to Claim 6, further comprising the step of reducing interocular separation.

8. The method according to Claim 7, whereby said reducing of interocular separation results in an interocular separation, proportionately scaled for human interocular separation, of substantially less than about 60 mm.

9. The method according to Claim 7, whereby said reducing of interocular separation results in an interocular separation, proportionately scaled for human interocular separation, of about 2 mm or less.

10. A method of producing at least one image for being perceived as three dimensional, said method comprising the steps of:

providing a viewing system that includes a stereo display; and

configuring the viewing system such that crosstalk produced by the stereo display is perceived as foreground and background blur instead of ghosting.

11. The method according to Claim 10, wherein said stereo display comprises a suspended particle display.

12. The method according to Claim 10, wherein said stereo display comprises a reverse emulsion display.

13. The method according to Claim 10, wherein said stereo display comprises an LCD display.

14. The method according to Claim 10, wherein said stereo display comprises a holographic display.

15. The method according to Claim 10, wherein said stereo display comprises a micromirror display.

5 16. Method for rendering a visually comfortable three-dimensional image, said method comprising the steps of:

 providing an arrangement for producing at least one perceptible image; and

10 compensating the image center-of interest prior to viewing.

 17. Method for rendering a visually comfortable three-dimensional image, said method comprising the steps of:

15 providing an arrangement for producing at least one perceptible image; and

 providing an arrangement for viewing the at least one image via microstereopsis.

20 18. The method according to Claim 17, further comprising the step of compensating the image center-of interest prior to viewing.

25 19. The method according to Claim 17, whereby crosstalk produced by the image producing display is perceived as foreground and background blur instead of ghosting.

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20. The method according to Claim 17, wherein:

at least two images are produced by said image producing arrangement; and

said method comprises periodic switching
5 between said at least two images that is sufficiently rapid to produce a perceptible three-dimensional image without flicker.

21. The method accordingly to Claim 17,
10 wherein said image-producing arrangement is adapted to be switched selectively to a static monoscopic state.

22. The method according to Claim 17, further
15 comprising periodic switching between a left-image dynamic stereo state and a right-image state dynamic stereo state that is sufficiently rapid as to produce a perceptible three-dimensional image.

23. Apparatus for rendering a visually
comfortable three-dimensional image, said apparatus comprising:

20 an arrangement for producing at least one perceptible image; and

an arrangement for viewing the at least one image via microstereopsis.

24. The apparatus according to Claim 23,
25 whereby crosstalk produced by the image producing display is perceived as foreground and background blur instead of ghosting.

25. The apparatus according to Claim 23,
wherein:

said image producing arrangement is adapted to
produce at least two images; and

5 said apparatus further comprises an arrangement
for periodically switching between said at least two
images as to produce a perceptible three-dimensional
image without flicker.

10 26. The apparatus according to Claim 23,
wherein said image-producing arrangement is adapted to be
switched selectively to a static monoscopic state.

15 27. The apparatus according to Claim 22,
further comprising an arrangement for periodically
switching between a left-image dynamic stereo state and a
right-image dynamic stereo state sufficiently rapidly as
to produce a perceptible three-dimensional image without
flicker.